

IN THE CLAIMS:

1. (Currently Amended) A photomask etch chamber, comprising:
a plasma etching chamber;
a substrate support member disposed inside the chamber, wherein the substrate support member is configured to support a photomask substrate;
a ceiling disposed on the chamber; and
an endpoint detection system disposed in the substrate support and configured to detect one or more test patterns disposed on ~~a peripheral region of~~ the photomask substrate.
2. (Cancelled)
3. (Currently Amended) The chamber of claim 1, wherein the endpoint detection system is disposed through a peripheral region of the substrate support member and positioned directly below ~~the~~ a peripheral region of the photomask substrate.
4. (Original) The chamber of claim 1, wherein the endpoint detection system is an interferometer endpoint detection system.
5. (Currently Amended) A photomask etch chamber, comprising:
a substrate support member disposed inside the chamber, wherein the substrate support member is configured to support a photomask substrate;
a ceiling disposed on the chamber; and
an interferometer endpoint detection system disposed at least partly through a portion of the ceiling through a peripheral region of the ceiling, wherein the interferometer endpoint detection system is configured to detect one or more test patterns disposed on a peripheral region of the photomask substrate.
6. (Original) The chamber of claim 5, wherein the interferometer endpoint detection system is disposed directly above a corner region of the photomask substrate.
7. (Original) The chamber of claim 5, wherein the photomask substrate is about 6 inches wide and about 6 inches long and the interferometer endpoint detection system

is disposed about 2.8 inches from a horizontal center line and about 2.8 inches from a vertical center line of the photomask substrate.

8. (Original) The chamber of claim 5, wherein the interferometer endpoint detection system is disposed directly above a peripheral region of the photomask substrate.

9. (Original) The chamber of claim 5, wherein the interferometer endpoint detection system is configured to detect a peripheral region of the photomask substrate.

10. (Cancelled)

11. (Original) The chamber of claim 5, wherein the interferometer endpoint detection system is configured to detect one or more test patterns disposed on a corner region of the photomask substrate.

12. (Original) The chamber of claim 5, wherein the interferometer endpoint detection system comprises:

a light source for sending a light beam to a surface of the substrate; and

a light detector for measuring the intensity of the light beam reflected from the substrate surface.

13. (Original) The chamber of claim 5, wherein the interferometer endpoint detection system further comprises a focusing assembly for focusing the light beam to a spot on the substrate surface.

14. (Original) The chamber of claim 5, wherein the interferometer endpoint detection system further comprises a computer for calculating at least a portion of the waveform spectra of the reflected light beam.

15. (Original) The chamber of claim 14, wherein the computer is configured to compare the waveform spectra of the reflected light beam with a stored characteristic waveform spectra pattern.

16. (Currently Amended) A photomask etch chamber, comprising:

a chamber body suitable for plasma etching therein;

a substrate support member disposed inside the chamber body, wherein the substrate support member; member is configured to support a photomask substrate;
and

~~a photomask substrate disposed on the substrate support member and having one or more test patterns disposed on a peripheral region;~~

~~an interferometer endpoint detection system disposed through a peripheral region of the substrate support member configured to detect the one or more test patterns disposed on the photomask substrate.~~

17. (Original) The chamber of claim 16, wherein the interferometer endpoint detection system is disposed directly below a corner region of the photomask substrate.

18. (Original) The chamber of claim 16, wherein the photomask substrate is about 6 inches wide and about 6 inches long and the interferometer endpoint detection system is disposed about 2.8 inches from a horizontal center line and about 2.8 inches from a vertical center line of the photomask substrate.

19. (Currently Amended) The chamber of claim 16, wherein the interferometer endpoint detection system is disposed directly below the a peripheral region of the photomask substrate.

20. (Original) The chamber of claim 16, wherein the interferometer endpoint detection system is configured to detect a peripheral bottom region of the photomask substrate.

21. (Cancelled)

22. (Original) The chamber of claim 16, wherein the interferometer endpoint detection system is configured to detect one or more test patterns disposed on a corner region of the photomask substrate.

23-27. (Cancelled)

28. (New) The chamber of claim 16, wherein the interferometer endpoint detection system is disposed through a peripheral region of the substrate support member.